Background: Making an accurate diagnosis of paediatric soft tissue tumours requires a combination of diagnostic imaging tests, each chosen for its ability to provide specific information about different aspects of the patient's condition. Each imaging modality has its own advantages and disadvantages, and it is important to remember that no single imaging test can provide all the data required for a thorough evaluation.

Purpose: Evaluating and diagnosing a soft tissue neck mass can be a multi-step process that involves considering the patient's symptoms, medical history, and physical examination results, as well as conducting various diagnostic imaging tests. This is a complex case study is of a 1-year-old female who presented with a large neck swelling which when diagnosed was a malignant Rhabdoid tumour of the left neck and base of skull. The tumour was complex and in a difficult location, encasing the carotid artery, making the patient not viable for surgery and underwent a variety of diagnostic imaging at our hospital. The patient experienced multiple complications throughout her time with us, including a venous thrombus of her internal jugular vein, left venous occipital infarct, volume loss in the cerebellar and eventually developed intracranial disease of hydrocephalus with evidence of leptomeningeal spread of disease and paralysis of vocal cords and larynx.

Summary of content: This poster will show how a variety of diagnostic imaging including ultrasound, CT and MRI was used to help with a prompt diagnosis and aid the patient's clinical treatment and management of a malignant rhabdoid tumour.

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OBS & GYNAE POSTER PRESENTATIONS

P059 Inclusive pregnancy status in a radiotherapy setting - implementation and evaluation

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Background: Discussing pregnancy status can be a sensitive subject, specifically for patients with a cancer diagnosis, who may have existing or treatment related infertility1. The UK has 5-600,000 people who identify as transgender, gender diverse or intersex, which also challenges discussions surrounding pregnancy2. In light of this, the Ionising Radiation (Medical Exposure) Regulations (IR(ME)R) were updated in 2017 to include gender neutralised language and pregnancy checking prior to exposure for all patients aged 12-55 years regardless of gender3. The 2021 Society of Radiographers' (SoR) inclusive pregnancy status (IPS) guidelines recommended radiographers apply it in a sensitive, educationally informed manner2.

Method: In this presentation, we share findings and reflections relating to the local implementation of the SoR IPS guidelines, considering radiation safety and cultural responsibility. Impacts on patient care and staff education, ascertained from staff feedback questionnaires prior to and 6 months after implementation, will be discussed.

Results: Staff reported experiencing emotional and professional benefit from the changes and patients have welcomed the updated and improved conversations. Certain points from the training have enhanced a positive

culture within the staff team, with evidence of self-policing and collaborative sense making through informal discussion. Training has now been included as part of induction programmes.

Conclusion: Changing processes around inclusive pregnancy status has had positive benefits for staff, patients and departmental culture. The IPS process enables staff to use clinical judgement and perform patient centred care. Moving forward, IPS should be adopted as Trust policy, in line with IR(ME)R guidelines and patient experience.

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P060 Aetiology of sub-chorionic haemorrhage: A narrative review

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Background: Sub-chorionic haemorrhage (SCH) refers to an area of bleeding located adjacent to the gestation sac and is commonly identified during ultrasound assessment of pregnancies. There is a disparity of opinion surrounding the risk SCH poses to pregnancies and the ultrasound features of SCH which may correlate with degree of risk. Much of the recent evidence base however fails to consider the aetiology of SCH, with poor consensus on what the leading cause of SCH may be.

Method: A narrative review was conducted, encompassing papers from 2012-2023. Multiple databases were searched such as CINAHL, PubMed, SAGE and Medline to enable a broad search. Key terms were chosen using an adapted PICO framework. Inclusion and exclusion criteria were applied; 7 papers were identified. Snowballing identified a further two papers, both of which were dated but were seminal pieces of research. Mind-mapping was used to identify themes to frame the research question, and a CASP tool was used to review the 9 papers.

Results: Four potential aetiologies were identified from the review: particular IVF protocols, presence of autoantibodies or similar immunological factors, thrombophilia or similar coagulation deficiencies and detachment of the chorionic membrane from the uterine wall.

Conclusion: The review identified the urgent need for future studies to examine more thoroughly each of the four potential aetiologies, in isolation and in combination, to determine the true aetiology of SCH and to ensure that those in the high-risk groups are clinically managed with greater surveillance in the future.

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P061 Can miscarriage be accurately predicted in early pregnancy using transvaginal ultrasound parameters?

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Background: Ultrasound is often the first line of investigation when evaluating early pregnancy. Current NICE guidelines regarding confirmation of miscarriage are restrictive and can often mean that the first ultrasound scan is inconclusive leading to increased stress for patients and further scans and investigations. There have been several studies undertaken to evaluate the ultrasound parameters that can predict miscarriage that have the potential to be used in clinical practice allowing better counselling of patients regarding their risk of pregnancy loss.

Method: A systematic literature search as undertaken using PubMed and Science Direct including literature published from 2012 to 2022. Inclusion and exclusion criteria were applied and any literature suitable for inclusion was critically appraised using the CASP framework.

Results: Mean sac diameter, crown-rump length, yolk sac diameter and embryonic/fetal heart rate can be used to predict pregnancy loss. Multivariate predictive models combining these parameters demonstrated a sensitivity of 72.5% and specificity of 98.4% suggesting that they may prove useful in clinical practice however; these would need to be evaluated on a larger scale in multicentre trials to improve validity.

Conclusion: Multivariate predictive models using ultrasound parameters can predict miscarriage with a good degree of accuracy and could be used in clinical practice to facilitate better counselling of patients.

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P063 Maternal ART throughout pregnancy prevents caudate volume reductions in HIV- exposed uninfected neonates

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Background: Successful prevention of mother-to-child HIV transmission (PMTCT) programs have reduced the risk of infant HIV infection in South Africa from 8% in 2008 to an estimated 1.4% in 2015, resulting in an increasing population of HIV-exposed uninfected (HEU) children. However, the long-term effects of HIV and antiretroviral (ART) exposure on the developing brain are not well known. While HEU children perform better than their HIV-infected counterparts, they continue to demonstrate greater neurodevelopmental delay than HIV-unexposed uninfected (HUU) children, especially in resource-poor settings. The critical period of brain development spans the period between second and third trimester of pregnancy and in the first two years postnatal life. Therefore, it is particularly important to monitor the developmental milestones of HEU children which may be delayed due to exposure to the virus in utero and postnatally, and possible ART exposure. Using manual tracing of brain regions on magnetic resonance (MR) images, we investigate in early infancy subcortical volumetric differences related to HIV and ART exposure. Examining neuroimaging measures a few weeks after birth has the advantage of eliminating some cofounding factors, such as parenting differences and/or breast versus bottle feeding.

Methods: We included one hundred and twenty infants (59 girls; 79 HEU; mean gestational age (GA) at scan ± sd = 41.5 ± 1.0 weeks) born to healthy HIV-infected and uninfected Xhosa-speaking women attending a community antenatal clinic in Cape Town, South Africa where HIV sero-prevalence approaches 30%. Of the 79 HEU infants, 40 were exposed to ART throughout gestation (HEU-preconception).

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BREAST POSTER PRESENTATIONS

P065 Real world PIK3CA variant prevalence -- a single centre retrospective analysis

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Background: The SOLAR-1 trial showed that alpelisib--fulvestrant extends progression free survival in patients with PIK3CA variants in hormone receptor (HR) positive, HER2 negative breast cancer previously receiving endocrine therapy 1 The reported PIK3CA variant frequency is approximately 40%2. With the recent NICE approval of alpelisib, we sought to determine the real-world PIK3CA variant prevalence to gauge the eligible patient cohort for treatment.

Method: All patients with advanced HR positive HER2 negative breast cancer receiving or having previously received CDK4/6 inhibitors at our centre were tested for PIK3CA at the regional genomics hub. This data was collected and analysed by the presence of a variant, the nature of it and its potential sensitivity to alpelisib, based on the SOLAR-1 identified 11 hotspot variants.

Results: To date, 25 eligible patients were tested, with 13 harbouring a variant, giving a frequency of 52%. Two patients had variants outside of the 11 hotspot areas and are therefore of uncertain clinical significance. Notably, one patient had two coexisting variants, one of which being scarcely documented previously.

Conclusion: In our cohort, a markedly higher PIK3CA variance rate was found. Combining this data with that of other centres will be useful to establish the representative frequency of PIK3CA variants in the United Kingdom. This data would then accurately inform service demands and needs. Further analysis of rare PIK3CA variants is needed to understand their clinical and therapeutic significance.

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P066 Implementation and evaluation of breast CBCT in a radiotherapy department

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Background: Historically, breast radiotherapy required two different planning and delivery techniques depending on nodal involvement: breast-only treatments used opposing single isocentre tangential beams whereas nodal fields